

# Notice of Allowability

Application No.

10/500,360

Examiner

Bruce H. Hess

Applicant(s)

OTSUHATA ET AL.

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE Amendment (12-27-05) and Interview (2-8-06)

2. ☒ The allowed claim(s) is/are 1-3

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some\* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
~~Paper No./Mail Date~~ 7-28-05

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413),  
~~Paper No./Mail Date~~ 1-24-06 and 2-8-06

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_.

Bruce H Hess  
Primary Examiner  
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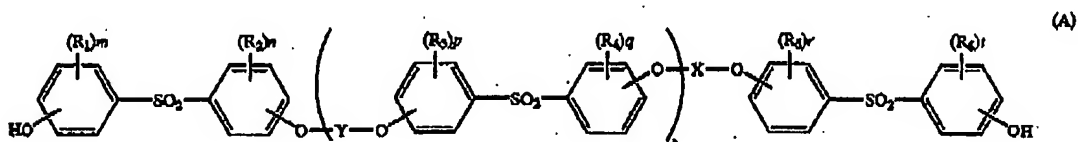
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An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

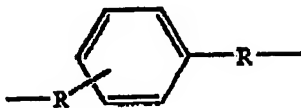
Authorization for this examiner's amendment was given in a telephone interview with applicants' attorney, Roger Hahn, on February 8, 2006.

Claims 1 and 3 have been amended as follows:

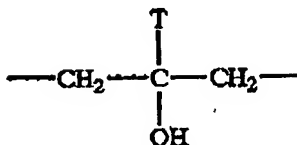
1. (Currently amended) A thermally sensitive recording medium comprising a thermally sensitive color developing layer containing colorless or pale colored basic leuco dye and a color developing agent as a main components on a substrate, wherein said thermally sensitive recording layer contains a mixture of acrylic emulsion and colloidal silica wherein said colloidal silica is not immobilized into said acrylic emulsion, further contains at least one kind of diphenylsulfone bridgeable compound represented by general formula A as the color developing agent,



wherein X and Y can be different or same and indicates a saturated or an unsaturated liner or grafted hydrocarbon group of carbon number 1-12 which can possess an ether bond, or indicate,



or



wherein, R indicates a methylene group or an ethylene group, T indicates a hydrogen atom or an alkyl group of carbon number 1-4,

and  $R_1-R_6$  independently a halogen atom, an alkyl group of carbon number 1-6, or an alkenyl group, further, m, n, p, q, r, t indicate an integer number of 0-4 and when are bigger than 2,  $R_1-R_6$  can be different, and a is an integer of 0-10

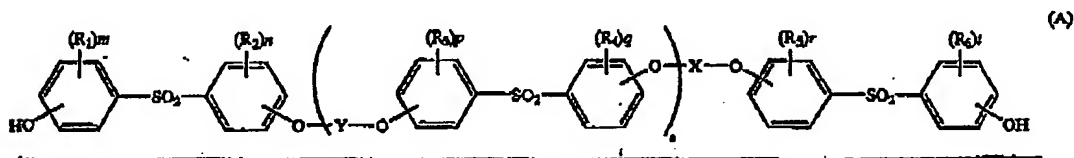
said diphenylsulfone bridgeable compound having an average particle diameter of 0.5  $\mu\text{m}$ ,

said colloidal silica having a particle size of 10-25 nm  
and,

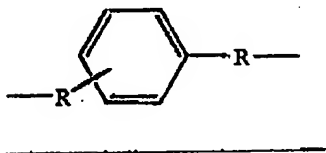
said acrylic emulsion being blended to the thermally sensitive recording layer in a blending amount of 3-50 weight parts of the acrylic emulsion to 100 weight parts of the thermally sensitive recording layer.

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3. (Currently amended) A method for the preparation of a thermally sensitive recording medium providing a thermally sensitive recording layer containing colorless or pale colored basic leuco dye and a color developing agent as a main components on a substrate, wherein said thermally sensitive recording layer contains a mixture of acrylic emulsion and colloidal silica wherein said colloidal silica is not immobilized into said acrylic emulsion, further contains at least one kind of diphenylsulfone bridgeable compound represented by general formula A as the color developing agent,

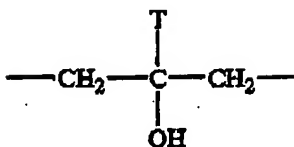


wherein X and Y can be different or same and indicates a saturated or an unsaturated linear or grafted hydrocarbon group of carbon number 1-12 which can possess an ether bond, or indicate,



or

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wherein, R indicates a methylene group or an ethylene group, T indicates a hydrogen atom or an alkyl group of carbon number 1-4,

and R<sub>1</sub>-R<sub>6</sub> independently a halogen atom, an alkyl group of carbon number 1-6, or an alkenyl group, further, m, n, p, q, r, t indicate an integer number of 0-4 and when are bigger than 2, R<sub>1</sub>-R<sub>6</sub> can be different, and a is an integer of 0-10

said diphenylsulfone bridgeable compound having an average particle diameter of 0.5 μm,

said colloidal silica having a particle size of 10-25 nm  
and,

said acrylic emulsion being blended to the thermally sensitive recording layer in a blending amount of 3-50 weight parts of the acrylic emulsion to 100 weight parts of the thermally sensitive recording layer ;

comprising coating said thermally sensitive recording layer on said substrate by means of an air knife coater.



BRUCE H. HESS  
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